



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/679,671

10/06/2003

Takuro Sugiura

9281-4688

4072

7590

03/18/2005

Brinks Hofer Gilson & Lione

P.O. Box 10395

Chicago, IL 60610

\*EXAMINER

LEE, GUIYOUNG

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/679,671	Applicant(s) SUGIURA, TAKURO	
	Examiner Guiyoung Lee	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5 and 15 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 6-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1003</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohwada et al. (US 6,692,134 B2).

Re claim 1: Ohwada discloses all the elements in claim 1 (See Fig. 2) except the limitation that “in a distribution of the depth of the groove with respect to the distance from the end surface disposed with the light emitting device to the groove, there are a first area where the depth of the groove linearly increased with respect to the distance from the end surface to the groove, and a second area formed apart from the light emitting device more than the first area in which an increasing rate of the depth of the groove with respect to the distance from the end surface is greater than that in the first area”. Nakamura teaches a light guide plate having a plurality of grooves on the light guide plate, and the depth of the grooves in a first area is linearly increase with respect to the distance from the end surface to the groove (See the first part of the graph in Fig. 9A) and an increasing rate of the depth of the grooves in second area increase with respect to the distance from the end surface to the grooves is greater than that in the first area (See the

Art Unit: 2875

second part of the graph in Fig. 9A). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the depth of the grooves in the Ohwada's light guide to increase exponentially in a second area as taught by Nakamura in order to provide sufficient quantity of light in the second area of the light guide so that the light guide plate can receive uniform luminescent over the entire area of the light guide plate.

Re claim 5: Nakamura teaches that the depth of the groove in the graph in Fig. 9A is given by an exponential function.

Re claim 15: Ohwada discloses that the lighting device is placed in the front of a LCD display unit (col. 7, lines 46-48).

*Allowable Subject Matter*

4. Claims 2-4 and 6-14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose a ratio of the depth of the groove formed on a side apart from the end surface to the depth of the other groove as set forth in claims 2-3. Further, The prior art of record does not disclose the expressions representing a distance from the end surface disposed with the light emitting device and a depth of the groove at a position as set forth in claims 4 and 6-8. Further, with regard to claim 9, the prior art of record does not disclose a third area of the grooves where the depth of the groove is constant irrespective of the distance from the end surface to the groove. Further, the prior art of record fails to disclose the limitation with regard to a pitch as set forth in claims 10-13. Further, with regard to claim 14, the prior art of

Art Unit: 2875

record does not disclose that a vertex angle of the isosceles triangle of the groove is formed ranging from an angle of 95 to 120 degrees.

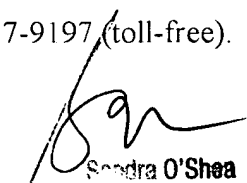
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guiyoung Lee whose telephone number is 571-272-2374. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LGY

  
Sandra O'Shea  
Supervisor  
Patent Examiner  
Electronic Business Center 2800